

PCT

BEST AVAILABLE COPY

WORLD INTELLECTUAL PROPERTY ORGANIZATION  
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification<sup>4</sup>:

G01N 33/00

A1

(11) International Publication Number:

WO 87/02773

(43) International Publication Date:

7 May 1987 (07.05.87)

(21) International Application Number: PCT/US86/02230

(22) International Filing Date: 21 October 1986 (21.10.86)

(31) Priority Application Number: 791,327

(32) Priority Date: 25 October 1985 (25.10.85)

(33) Priority Country: US

(71) Applicant (for all designated States except US): AUTO-SENSE CORPORATION [US/US]; 3501 Breakwater Avenue, Hayward, CA 94545 (US).

(71)(72) Applicant and Inventor: ELFMAN, Brian, Paul [US/US]; 1150 Ballena Blvd., Alameda, CA 94545 (US).

(74) Agent: HOWARD, William, H., F.; AutoSense Corporation, 3501 Breakwater Avenue, Hayward, CA 94545 (US).

(81) Designated States: AT, AT (European patent), AU, BE (European patent), CH, CH (European patent), DE, DE (European patent), DK, FI, FR (European patent), GB, GB (European patent), IT (European patent), JP, LU, LU (European patent), NL (European patent), NO, SE, SE (European patent), US.

Published

With international search report.  
With amended claims.

(54) Title: SYSTEM FOR BREATH SIGNATURE CHARACTERIZATION

## (57) Abstract

Apparatus (20) and method for generating a breath signature signal (32) for a person who delivers a breath sample to a breath sampler (22). A transducer (28) is communicated with the breath sampler (22), for sensing at least the temperature, the pressure and humidity of the breath sample. In response, the transducer (28) generates a breath signature signal (32) which distinguishes one person from another. The breath sample can be tested (a) for validity, (b) for distinguishing it on the basis of sex and age, (c) for selecting whether or not the same person delivered two different breath samples, and (d) for recognizing the identity of a particular person giving two different breath samples. Additional features include breath references (36, 36A-D, 38, 38A-D, 62), comparators (34, 34A-D), a distinguisher (34B), a selector, (34C), and a recognition means (34D).

